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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/667,297      | 09/22/2000  | Eric R. Lovegren     | R11.12-0701         | 1706             |

27367 7590 10/11/2006

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EXAMINER

WEST, JEFFREY R

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2857

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

09/667,297

Applicant(s)

LOVEGREN ET AL.

Examiner

Jeffrey R. West

Art Unit

2857

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 27 September 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: \_\_\_\_\_.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

  
EXAMINER-AU 2857

## Applicant Argues:

As noted in Carsella col. 9, lines 6-20, the "auto referencing step" involves a direct measurement of the reflected pulse. This is not an estimation as set forth in the pending claims. For this reason alone, the rejection should be withdrawn.

It is noted that while Applicant's arguments are directed toward the Carsella reference, it appears that Applicant is actually arguing the teachings of U.S. Patent No. 5,134,377 to Reddy, III et al.

Reddy, III, discloses:

In the autoreferencing step, the negative detection threshold is set at a maximum positive value by MCU 302 (the threshold is inverted by amplifier 310 to produce the negative threshold). A launch pulse is then sent down a selected cable. If the level of any reflection seen at the non-inverting input of comparator 314 does not exceed the threshold at the inverting input of the comparator, then MCU 302 reduces the detection threshold by one step and repeats the process until a reflection is received which exceeds the threshold. MCU 302 then steps the threshold up one step to complete the autoreferencing of that cable. The negative detection threshold for that particular cable is then stored in the EEPROM internal to MCU 302, where it may be recalled for later use. (column 9, lines 6-20)

First, the Examiner maintains that the cited sections of Reddy, III, indicate that the autoreferencing step does not directly measure the reflected pulse, as argued by Applicant, but only determines if the level of any reflection seen at the non-inverting input of the comparator exceeds a threshold. The threshold is then adjusted until any level of reflection does exceed the threshold without performing a measurement or accurate determination of the reflected pulse, but rather uses random reflections that are estimates of the actual pulse amplitude.

The Examiner further asserts that the estimating step is disclosed by Applicant on page 16, lines 1-10, specifically:

A reference amplitude is set to a value that relates to the amplitude of the transmitted microwave pulse, at step 64. At step 66, a second dielectric parameter is set to a value that corresponds to the dielectric of second material 14. At step 68, an estimated first amplitude is calculated as a function of the reference amplitude, the correction factor, the first dielectric parameter, and the second dielectric parameter.

Therefore, the pulse "estimation" disclosed by Applicant is only an "estimation" because it is calculated based on a correction factor and/or dielectric parameters.

The Examiner asserts that this is also met by the combination of Carsella and Reddy, specifically, since the invention of Carsella discloses that the microprocessor is adapted to receive, from an operator, information related to properties of the materials (i.e. dielectrics) (Carsella; column 5, lines 30-37) and that the amplitude of the reflected pulses are corrected by gain based on the properties of the materials (Carsella; column 4, lines 43-48) and the invention of Reddy teaches calculating a threshold as a function of a reference amplitude of the transmitted microwave pulse and the amplitude of the reflected pulse (column 1, line 64 to column 2, line 2 and column 9, lines 6-20), the combination would have calculated the threshold as a function of the transmit pulse amplitude and the information related to the properties of the materials.

Applicant then argues:

Further, even if somehow one could equate the actual measurement of a value as described in Carsella with Applicant's novel technique of estimation, the Carsella reference only takes a single measurement at the end of a cable which causes a reflection. This also is different from the claimed invention in which two pulses are estimated: an estimated fiducial pulse amplitude and an estimated first pulse amplitude. For this additional reason, the rejection should be withdrawn.

It is unclear to the Examiner whether this argument is directed to Carsella or Reddy. However, assuming that this argument is to be directed to Reddy, the Examiner maintains that the invention of Carsella specifically discloses employing thresholds for detecting reflections at the first, second, and fiducial interfaces (McEwan; column 8, line 66 to column 9, line 3) and since Reddy suggests employing thresholds specifically adapted to the particular conditions being measured, the combination would have employed a specific threshold for detecting each of the reflections at the first, second, and fiducial interfaces.



EXAMINER - 2857